L 60440-65

ACCESSION NR: AP5016527

values of the entropy of both α and γ phases. The <u>martensitic transformation</u> caused by the strong magnetic field did not proceed at one definite field, but in a series of jumps, from which the first (at $H=H_k$) appeared the greatest. The critical field H_k, at which the most intensive martensitic burst started, depended weakly on the duration of the magnetic impulse. Critical field dependency on temperature was in accord with the <u>thermodynamic theory</u> of phase transformations of the first order. Orig. art. has: 7 figures.

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Physics of Metals, AN SSSR)

SUBMITTED: 24Jul64   ENCL: 00   SUB CODE: MM, EM

NO REF SOV: 003   OTHER: 004

Card 2/2

L 10285-66   EWT(1)/EWT(m)/EWP(t)/EWP(b)   IJP(c)   JD/GG

ACC NR: AP5025320   SOURCE CODE: UR/0126/65/020/003/0373/0378

AUTHOR: Fakidov, I. G.; Volegov, L. P.; Krasovskiy, V. P.

ORG: Institute of Physics of Metals, AN SSSR (Institut fiziki metallov AN SSSR)

TITLE: Magnetoelastic properties of antiferromagnetic compound MnAu$_2$

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 3, 1965, 373-378

TOPIC TAGS: intermetallic compound, antiferromagnetism, elastic modulus, magnetic property, elasticity, antiferromagnetic material, shear modulus, manganese compound, gold compound

ABSTRACT: Polycrystalline cylindrical samples of MnAu$_2$ were made by smelting at 1100C a mixture of Mn (99.98% pure) and Au (99.99%), subsequent casting, and heat treatment providing magnetic properties described by A. Meyer and P. Taglang (J. Phys. Rad., 1956, 17, 457). The intermetallic compound had a helicoid spin structure, a Neel temperature $T_N = 90C$, a threshold $H_t = 8000$ oe, and a density $\rho = 15.4$ g cm^{-3}. The changes in the shear modulus G and the Young modulus E were determined under changing conditions of temperature (20 - 140C) and external magnetic field. The curves showing relative changes of shearing modulus G/G_0

Card 1/2   UDC: 538.65+539.32

L 10285-66

ACC NR: AP5025320

$(G_0$ at 20C was 11.56×10 dyne/sq cm) with temperature were plotted for the sample in the antiferromagnetic (H = 0) and ferromagnetic state (H = 18,000 oe). The curve H = 0 showed that G decreased with increased temperature, reached a minimum at 800C, acquired a maximum in the Neel point (T_N = 96C), and decreased continuously in the paramagnetic region. The G of $MnAu_2$ changed little with increased field to the threshold value (H = 8000 oe), then sharply decreased and reached a minimum at H = 16,000 oe. The shearing modulus G of $MnAu_2$ in the ferromagnetic state (H = 18,000 oe) did not exhibit any noticeable anomalous changes during the antiferromagnetism $\rightarrow$ ferromagnetism transition in the Curie point. The changes in anomaly of the shearing modulus during the antiferro-magnetism-ferromagnetism transition were sharper than those of the Young modulus. This was related possibly to the helicoid distribution of magnetic moments. The anomalous behavior of the Young and shearing moduli was a result of disintegration of the helicoid spin structure brought about by the magnetic transformations antiferromagnetism $\rightarrow$ paramagnetism ($T = T_N$ and H = 10) and antiferromagnetism $\rightarrow$ ferromagnetism ($T < T_N$ and $H > H_t$). Orig. art. has: 5 figures.

SUB CODE: 20 / SUBM DATE: 14Sep64/   NR REF SOV: 004/ OTHER: 007

Card 2/2   hw

L 14991-66   EWT(1)/EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b)   IJP(c)   MJW/JD

ACC NR: AP5028570 (N)   SOURCE CODE: UR/0126/65/020/005/0793/0795

AUTHOR: Voronchikhin, L. D.; Zavadskiy, E. A.; Fakidov, I. G.

ORG: Institute of Physics of Metals AN SSSR (Institut fiziki metallov AN SSSR)

TITLE: Superparamagnetism in austenitic steels

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 5, 1965, 793-795

TOPIC TAGS: austenitic steel, paramagnetism, magnetization, magnetic field, magnetic moment, metal physical property, metal physics

ABSTRACT: Superparamagnetism was studied in 40Kh2N20 and 50Kh2N22 austenitic steels in order to determine the average magnetic moments and dimensions of the local ferromagnetic ordering regions (clusters). Magnetization curves are given both for constant magnetic fields and strongly changing ones. Sample dimensions were 1 mm (diameter) and 10 mm (length). The data showed that the experimental portions of the magnetization curves, corresponding to the values of the fields causing martensitic transformation in these steels, can be described by the Langevin function

UDC: 669.15 : 538.22

Card 1/3

L 14991-66
ACC NR: AP5028570

$$\frac{7}{I_\infty} = \frac{\bar{\sigma}}{\sigma_\infty} = L\left(\frac{MH}{kT}\right). \qquad (1)$$

where k is Boltzman's constant, T is the absolute temperature, M is magnetic moment of the superparamagnetic particle and I_∞ is saturation magnetization of the sample. Satisfactory agreement of the experimental and calculated curves exhibit the utility of equation (1) for calculating the magnetic moments of particles. Two boundary cases were considered, corresponding to the conditions when $MH/kT \ll 1$ (weak field) and $MH/kT \gg 1$ (strong field). Equation (1) for the case when $MH/kT \ll 1$ reduces to

$$T = \frac{NM^2}{3k}\frac{H}{T}.$$

where N is the number of particles per cm^3; for the case when $MH/kT \gg 1$, the following was applicable:

$$\frac{7}{I_\infty} = \frac{\bar{\sigma}}{\sigma_\infty} = 1 - \frac{kT}{M}\frac{1}{H}.$$

Card 2/3

L 14991-66

ACC NR: AP5028570

The average dimensions of the particles were calculated to be $d = 10$ angstrom. The conclusions substantiated the authors' hypothesis of the presence of paramagnetism in austenitic steels based on the calculated magnetic moments and the impossibility of attaining saturation even in fields as high as $150 \cdot 10^3$ oersteds. Orig. art. has: 3 figures.

SUB CODE: 11,20/ SUBM DATE: 30Jul65/ ORIG REF: 002/ OTH REF: 002

Card 3/3

L 31464-66   EWT(m)/T/EWP(t)/ETI   IJP(c)   JD

ACC NR: AP6023111   SOURCE CODE: UR/0126/66/021/003/0436/0441

AUTHOR: Voronchikhin, L. D.; Fakidov, I. G.

ORG: Institute of Physics of Metals, AN SSSR (Institut fiziki metallov, AN SSSR)

TITLE: Determining the latent heat of martensite conversion induced in steel by a magnetic field

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 3, 1966, 436-441

TOPIC TAGS: magnetic effect, martensitic transformation, constant magnetic field, pulsed magnetic field, calorimetry, nickel steel, high temperature phenomenon

ABSTRACT: The authors study the thermal phenomena which accompany martensite conversion induced by a magnetic field in steels. The study confirms the previously known fact of stepwise formation of isolated martensite bodies and indicates that a similar mechanism of martensite conversion takes place regardless of the physical causes underlying the $\gamma \to \alpha$ conversion. A method is proposed for determining the latent heat of martensite conversion due to the effect of the magnetic field in 40Kh2N20 and 58Kh4N8S3M steels. The chemical composition of these steels is given in the table below. It is shown that both pulsed and constant magnetic fields may initiate this conversion. The advantages of the proposed method for determining the latent heat of austenite-to-martensite conversion in a magnetic field are discussed in comparison with the calorimetric method.

Card 1/2

UDC: 548.53;538.65

Card 2/2 MU

ACC NR: AP6037098   SOURCE CODE: UR/0056/66/051/005/1317/1320

AUTHOR: Zavadskiy, E. A.; Fakidov, I. G.

ORG: Institute of Physics of Metals, Academy of Sciences SSSR (Institut fiziki metal-lov Akademii nauk SSSR)

TITLE: Magnetic properties of the compound Mn_3Ge_2 in strong magnetic fields

ABSTRACT: The purpose of the investigation was to determine the magnetic moment directly from measurements of the magnetization in the state of weak ferromagnetism. The tests were made in fields of intensity up to 300 kOe in the temperature interval from 370 to 77K. The measurements were made on polycrystalline samples using a pulsed magnetic balance and a piezoelectric pickup. The results showed a transition from the antiferromagnetic state to the state of weak ferromagnetism at the first critical point (160K). With increasing field, the transition temperature decreases. In the state of weak ferromagnetism, the dependence of the magnetization on the field is linear up to 50 kOe, after which saturation sets in. From the occurrence of the point of saturation it is found that at $T > 100K$ the magnetic moment per manganese atom is 1.5 Bohr magnetons, whereas at lower temperatures a strong magnetic field causes

Card 1/2

ACC NR: AP6037058

transition from the antiferromagnetic state into a state with magnetic moment 2.3 Bohr magnetons per manganese atom. The change occurring in the magnetic structure of Mn_3Ge_2 in a strong magnetic field close to 100K is confirmed also by the temperature dependences of the magnetization and is accompanied by a change in the transition entropy by a factor 2.4. The authors thank V. N. Novogrudskiy for supplying the samples and N. I. Kuntsevich for help with the measurements. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 02Jun66/ ORIG. REF: 007/ OTH REF: 002

Card 2/2

ACC NR: AP7005336.

SOURCE CODE: UR/0181/67/009/001/0139/0144

AUTHOR: Zavadskiy, E. A.; Fakidov, I. G.

ORG: Institute of Physics of Metals, AN SSSR, Sverdlovsk (Institut fiziki metallov AN SSSR)

TITLE: Magnetic properties of the alloy FeRh in strong magnetic fields

SOURCE: Fizika tverdogo tela, v. 9, no. 1, 1967, 139-144

TOPIC TAGS: iron base alloy, rhodium containing alloy, saturation magnetization, temperature dependence, critical point, antiferromagnetism, phase transition

ABSTRACT: In view of discrepancies between the results of other investigators, the authors measured in detail the magnetization of FeRh over a wide range of magnetic fields and temperatures. The iron was alloyed with 53 at.% of rhodium in a high-frequency furnace and in an inert atmosphere. The measurements were made on solid samples by an induction method and on powders by means of a pulsed magnetic balance. The two measurement procedures were described by the authors earlier (FMM v. 12, 832, 1961 and v. 21, 693, 1966). The measurements were made at temperatures 77 - 400K and in magnetic fields up to 330 kOe. The results showed that saturation set in at temperatures above the critical value at which the FeRh goes over from the antiferromagnetic into the ferromagnetic state. The dependence of the critical field on the temperature is a straight line with constant slope in the entire range of temperatures and magnetic fields. Temperature hysteresis of the electric resistivity and of the

Card 1/2

ACC NR: AP7005336

magnetization were clearly observed in the tests at the transition from the antiferro-magnetic into the ferromagnetic state. It is pointed out that this linear dependence changes if a change takes place in the magnetic structure at some value of the mag-netic field, causing the slope of the line to change. The authors thank A. Ya. Afa-nas'yev for preparing the alloy and I. I. Kuntsevich for help with the measurements. Orig. art. has: 6 figures and 4 formulas.

SUB CODE: 20/ SUBM DATE: 03Jun66/ ORIG REF: 004/ OTH REF: 009

Card 2/2

L.14525-63   EWA(k)/EWP(k)/BDS/3W2/EEC(b)-2/ES(t)-2/EWT(1)   AFFTC/ESD-3/
ASD/RADC/APGC/AFWL/SSD   Pf-4/P1-4   GG/JHB/WG/IJP(C)/K/EH
ACCESSION NR: AP3005341   8/0181/63/005/008/2303/2305

84
83

AUTHOR: Kask, N. Ye.; Korniyenko, L. S.; Prokhorov, A. M.; Fakir, M.

TITLE: Electron paramagnetic resonance and spin-lattice relaxation of the Nd^{3+} impurity ion in the $CaWO_4$ single-crystal lattice

SOURCE: Fizika tverdogo tela, v. 5, no. 8, 1963, 2303-2305

TOPIC TAGS: electron paramagnetic resonance, Nd^{3+} ion, spin-lattice relaxation, calcium tungstate crystals, neodymium-doped calcium tungstate

ABSTRACT: A study of EPR spectra and spin-lattice relaxation of the Nd^{3+} ion in the $CaWO_4$ lattice has been carried out at liquid helium temperatures on the 3-cm band. The observed spectrum consisted of one intense line produced by even isotopes and two systems of eight components each produced by odd isotopes Nd^{143} and Nd^{145}. Angular dependence of the spectrum indicated a tetragonal symmetry of the crystal field surrounding the ion. Perpendicular and parallel g-factors and the superfine splitting factors for the odd isotopes were determined. It is shown that at temperatures above 6K the relaxation is determined by nonresonant two-phonon processes. Below that temperature, where single-phonon processes

Card 1/2

L 14525-63
ACCESSION NR: AP3005341

should predominate, observation of spin-lattice relaxation becomes difficult
because of the phonon "narrow bottleneck" effect. When the thermal equilibrium
of the spin system is weakly disturbed, as in the case of sufficiently small
power of the saturation pulses, the "narrow bottleneck" effect is not observed,
and the temperature variation of the spin-lattice relaxation can be determined.
Orig. art. has: 1 figure and 3 formulas.

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im. M. V. Lomonosova
(Moscow State University)

SUBMITTED: 02Feb63   DATE ACQ: 06Sep63   ENCL: 00

SUB CODE: PH   NO REF SOV: 001   OTHER: 003

Card 2/2

ACCESSION NR: AP4013521

S/0181/64/006/002/0549/0553

AUTHORS: Kask, N. Ye.; Korniyenko, L. S.; Fakir, M.

TITLE: Electron paramagnetic resonance and spin lattice relaxation of the Nd^{3+} ion in single crystals of CaF_2

SOURCE: Fizika tverdogo tela, v. 6, no. 2, 1964, 549-553

TOPIC TAGS: electron paramagnetic resonance, spin lattice relaxation, Nd^{3+} ion, CaF_2, single crystal, fluorite, tetragonal spectrum, tetragonal symmetry, orthorhombic spectrum, orthorhombic symmetry, absorption line, g factor, paramagnetic ion

ABSTRACT: The authors studied the spectra of ions in crystalline fields of tetragonal and orthohombic symmetry at a frequency of 9500 megacycles. All crystals investigated showed identical spectra corresponding to the tetragonal and orthorhombic symmetry in the vicinity of the paramagnetic ion. With increase in the concentration of Nd ions from 0.3 to 1% the orthorhombic spectrum grow in intensity relative to the intensity of the tetragonal spectrum at a rate approximately proportional to the square of the concentration. The orthorhombic spectrum

Card 1/3

ACCESSION NR: AP4013521

may consequently be due to the replacement of three Ca^{2+} ions by two paramagnetic trivalent atoms. Measurements of the principal values of the g factors gave $g_{||}$ = 4.410 ± 0.010 and $g_{\perp}$ = 1.300 ± 0.003. The width of the absorption line at half intensity and when the external magnetic field was parallel to the tetragonal axis of the crystalline field was found to be 10 oersteds. The dependence of the spin-lattice relaxation time on temperature is shown in Fig. 1 of the Enclosure. "The authors express their thanks to Professor A. M. Prokhorov for his useful discussions of the results of this work." Orig. art. has: 1 figure and 4 formulas.

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernoy fiziki MGU (Scientific Research Institute of Nuclear Physics MGU)

SUBMITTED: 13Sep63   DATE ACQ: 03Mar64   ENCL: 01

SUB CODE: PH   NO REF SOV: 001   OTHER: 004

Card 2/3

AUTHOR: Fakirov, D.

TITLE: Concerning the spatial distribution of the neutrino beam generated in high-energy nucleon collisions

TEXT: There was carried out a calculation of the spatial distribution of the neutrino beam generated in nucleon collisions as a result of decay of the pions produced in these collisions. The calculation is based on the Landau theory of multiple production. It is noted that neutrino-beam intensity reaches a peak in the target.

[Abstracter's note: Complete translation]

Card 1/1

FAKIROV, Docho

Spatial distribution of leptonsat originated during the collision of fast particles. Godishnik fiz mat 56 no.2:93-117 '61/'62 [publ. '63].

L 23330-55   EWT(m)/EPF(c)/EWP(j)/T   Pc-4/Pr-4   RM

AUTHOR: Kargin, V. A.(Academician); Fakirov, S. Kh.; Bakeyev, N. F.

TITLE: New method of direct observation of the structure of polymer solutions in electron microscope

ABSTRACT: There have been recently new ideas developed concerning the structure of amorphous polymers. The latter are assumed to be ordered systems built of chains forming packets (see the latest work by the authors in Vysokomolek. Soyed. 5, 98 (1964)). In the present paper, the authors describe a new method of preparation of replicas for use in the electron microscope. A substance is used as a solvent which glasses easily on cooling, with the temperature of vitrification above the room temperature. After dissolution of the polymer, the

Card 1/2

L 23530-65
ACCESSION NR: AP5000920

$\mathcal{Q}$

solution is cooled below T_c. Uniform glass is then formed in which the structure of the polymer is fixed (frozen in). The glass is cleaved, and from the surface a replica is made. α-polybutilene with the viscosity 1.25 was investigated. The solvent was purified rosin with a softening temperature of about 75C. The electron-microscopic analysis shows that ordered supermolecular structures in the solution of polymers can be formed which consists of chain packets. Orig. art. has: 2 figures

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 22Jul64   ENCL: 00   SUB CODE: MT, GC

NR REF SOV: 006   OTHER: 001

Card 2/2

L 61657-65   EWT(m)/EPF(c)/EWP(j)/T ---Pc-4/Pr-4 --- RM   30

ACCESSION NR: AP5015426   UR/0020/65/162/004/0851/0852 29

AUTHOR: Kargin, V.A.; Bakeyev, N.F.; Fakirov; S. Kh. Volynskiy, A.L.   B

TITLE: Electron-microscopic method of studying the supramolecular structure of polymers in solutions

SOURCE: AN SSSR, Doklady, v. 162, no. 4, 1965, 851-852, and insert facing p. 852

TOPIC TAGS: electron microscopy, polybutylene, polypropylene, molecular association, polymer structure

ABSTRACT: A new method of preparing samples for electron-microscopic studies of polymer solutions is proposed. A solvent of low critical temperature (propane, ethylene, etc.) is condensed in a glass capillary containing the polymer, after which the capillary is sealed and heated 20-25C above the critical temperature. When the end of the capillary is cut off, the solution of polymer in the gaseous solvents shoots out, striking the mesh (covered with a substrate) of the electron microscope. Using this technique, the authors studied two systems: a solution of poly-α-butylene in propane, and a solution of atactic polypropylene in propane (in concentrations from 0.05 to 3 wt.%). Photomicrographs show that the formation of ordered supramolecular structures occurs even in solutions of low concentrations. As the latter increase above 3%, the polymer does not dissolve completely,

Card 1/2

L 61657-65

ACCESSION NR: AP5015426

and as a result, coarse aggregates are formed which cannot be resolved by the electron microscope. Below 0.05%, the system is in a dispersed molecular state in which the size and shape of the individual molecules cannot be accurately resolved. The proposed method makes it possible to determine the character of the association of macromolecules directly in the solution. Orig. art. has: 5 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova (Moscow State University)

SUBMITTED: 08Dec64   ENCL: 00   SUB CODE: OC

NO REF SOV: 002   OTHER: 002

Card 2/2

KARGIN, V.A., akademik; BAKEIEV, N.F.; FAKIROV, S.Kh.; NIKANOROVA, N.I.

Structure of crystallizing polymer solutions. Dokl. AN SSSR 165
no.3:604-606   N '65.   (MIRA 18:11)

1. Moskovskiy gosudarstvennyy universitet.

FAKIROV, V.

The breakwater strip of the dams and possibilities of strengthening it.

p. 258 (GORSKO STOPANSTVO) Vol. 13, no. 6, June 1957,
Sofiia, Bulgaria

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

RUSANOV, A.I.; FAKTOR, E.A.

Thermodynamic study of the surface layers of liquid solutions.
Part 2: Entropy of the surface layers in binary systems. Koll.
zhur. 27 no.6:869-875 N-D '65.   (MIRA 18:12)

1. Leningradskiy universitet imeni A.A. Zhdanova. Submitted
May 4, 1964.

L 34421-66   EWT(m)/T   IJP(c)   WW/JW/RM

ABSTRACT: Formulas are derived for the calculation of the composition and entropy of surface layers of binary liquid solutions. Two methods, one based on calorimetric data and the other involving the use of vapor entropy, are employed. To illustrate the derived relationships, the entropies of the surface layers in the binary system $NaBr - H_2O$ are calculated as functions of concentration and temperature in the range of 25-50 °C, and the composition of the layers are calculated for 50 and 60 °C, assuming that H_2O vapor is ideal and that the temperature dependence of the surface tension is linear. Values obtained at various temperatures for the molar surface entropies in the $NaBr - H_2O$ system by use of the two methods indicate that a slight entropy maximum may appear which becomes more appreciable as the temperature is lowered. The existence of this maximum is attributed to a rearrangement of the structure of the surface layer under the influence of ions of the salt, a process

Card 1/2   UDC: 541.18:536.7

L 34421-66

ACC NR: AP6010548

0

similar to that taking place in the body of the solution. Orig. art. has: 1 figure, 4 tables, and 15 formulas.

SUB CODE: 07/ SUBM DATE: 04May64/ ORIG REF: 007/ OTH REF: 001

Card 2/2 BLG

FAKTOR, G.

Recent developments in the farming system of the U.S.A.   Zemledelie
25 no.2:84-86 F '63.   (MIRA 16:5)
              (United States—Agriculture)

FAKTOR, M.Sh.

Device for testing the magnets of a flaw detector. Put' i put.khoz.
4 no.11:34 N '60.   (MIRA 13:12)

1. Inzhener defektoskopnoy laboratorii, g. Odessa.
              (Magentic instruments—Testing)

FAKTOR, M.Sh., inzh. (Odessa)

> Germanium diodes in defectoscopes. Put' i put. khoz. 9
> no.3:37 '65.
> (MIRA 18:6)

FAKTOR, Z.

"Some little-known or new methods of measuring the properties of ferromagnetic materials."

p. 375 (Sdelovaci Technika) Vol. 5, no. 12, Dec. 1957
Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

Z/039/62/023/005/004/004
D291/D301

$I4.2900$

AUTHOR: Faktor, Zdeněk, Engineer

TITLE: Equations of magnetostrictive transducers and methods
             for determining the basic constants of such transdu-
             cers

PERIODICAL: Slaboproudý obzor, v. 23, no. 5, 1962, 288 - 294

TEXT: Dynamic equations for magnetostriction transducers are deri-
ved in a way that the influence is shown exerted by the transducer
dimensions and wave shapes on the properties and measured transduc-
er material parameters. An equivalent circuit is established and
some measuring methods are listed to determine the overall dependen-
ce between electrical values of the equivalent circuit and mechani-
cal properties of the transducer, as well as the mutual dependence
between some transducer material parameters. The magnetostriction
transducer under investigation, has centralized mass and compliance
and equations are derived for both longitudinal and torsional waves.
Magnetic properties are studied on a specimen with open magnetic

Card 1/3

Equations of magnetostrictive ...   Z/039/62/023/005/004/004
                                            D291/D301

transducer parameters. The obtained results are especially applica-
ble to ferritic magnetostriction transducers operating at medium
and low magnetic impedance values. There are 4 figures. The most
important English-language publication is: Dynamical Physical Para-
meters of the Magnetostrictive Excitation of Extensional and Tor-
sional Vibrations in Ferrites. Philips Res. Rep. 8, 1953, pp. 91-
132.

ASSOCIATION: Výzkumný ústav telekomunikací, Praha (Telecommunica-
             tion Research Institute, Prague)

SUBMITTED: January 8, 1962

Card 3/3

42533

Z/014/62/000/011/001/002
E192/E382

9.2/20

AUTHORS: Faktor, Zdeněk, Engineer and Sálek, Viktor

TITLE: Ferrite E cores

PERIODICAL: Sdělovací technika, no. 11, 1962, 402 - 408

TEXT: Five different types of E cores made of ferrites, type
H 10, are manufactured by the Šumperk Works in Czechoslovakia.
Two such cores are usually used for winding a coil. The shape of
a core is illustrated in Fig. 16 and the dimensions are as follows:
A 20 to 55 mm; L 8.6 to 27.8 mm; S 5 to 22 mm; B 15 to 37.5 mm;
C 5 to 17 mm; L_1 5.7 to 19 mm and r 2 to 2.5 mm. The most important
parameter of a core is its $\mu H/turn^2$ constant and this ranges from
0.35 to 4.2 for two E cores joined together. The cores can be used
at frequencies up to 100 kc/s, where their loss angle tan δ is
less than 0.1. To wind a coil two E cores are placed together and
joined by a suitable insulating varnish or upon (an epoxy resin);
this should be placed around the perimeter of the three "vertical"
members of the individual cores. The $\mu H/turn^2$ constant is normally
measured at 50 c.p.s. at a field strength of 5 mOe. This constant
Card 1/3

Ferrite E cores

Z/014/62/000/011/001/002
E192/E382

is also measured for pulse operation by using the comparison method, illustrated in Fig. 15. In this, L_n is a linear inductance of about 2 mH wound on a double E core with an air gap of 2 mm; L_x is the inductance of a coil having a known number of pulses, wound on the core to be measured. R_2 and R_3 are small resistances, while R_1 is the internal resistance of the generator. The deflection of the meter is adjusted by the potentiometer so that it is identical for both positions of the switch P . The unknown inductance is:
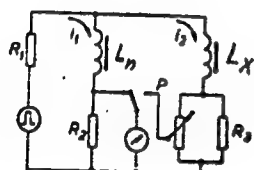
$$L_x = kL_n$$

(12)

where $k = J_1/J_2$ where J_1 and J_2 are the amplitude of the magnetization currents in L_n and L_x . The cores can be used at frequencies up to 5 Mc/s but their tan δ might increase appreciably. There are 16 figures, and 2 tables.

Card 2/3

Ferrite E cores

Fig. 15:

Z/014/62/000/011/001/002
E192/E382

Fig. 16:
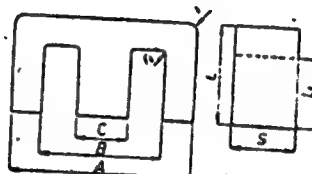
Card 3/3

FAKTOR, Zdenek, inz.

Contribution to the automation of RC component measurement. Automatizace 7 no.10:262-264 O '64.

1. Research Institute of Telecommunication, Prague.

SHCHEGLOV, Yu.A.; GOL'DENBERG, L.G.; FAKTOROVICH, A.A.; KRASNOLOB, K.Ya.

Automation of cut tomatoes receiving points and pumped transfer points of continuous lines in tomato processing. Izv. AN Mold. SSR. no.3:107-112 '63.   (MIRA 17:12)

L 21664-66   EWT(m)/ETC(f)/EWG(m)/T   DS

ACC NR: AP6000639   SOURCE CODE: UR/0407/65/000/001/0072/0073

AUTHOR: Lazarenko, B. R. (Kishinev); Fursov, S. P. (Kishinev);
Faktorovich, A. A. (Kishinev)

ORG: none

TITLE: Electrochemical pressure sensor

SOURCE: Elektronnaya obrabotka materialov, no. 1, 1965, 72-73

TOPIC TAGS: pressure measurement, gas pressure sensor, manometer

ABSTRACT: A two-electrode closed electrolytic cell (a 0.07-mm platinum wire
serves as one of the electrodes) with a compressed gas over the electrolyte is
recommended for measuring the gas pressure. Experiments carried out at 0—3 atm
pressure and at 200—760 torr vacuum exhibited a clear relation between the gas
pressure and the effective current flowing in a simple RL circuit. The advantages of
the device are: simplicity, multipurpose feature, and strong direct electric signal.
Disadvantage: effect of electrolyte temperature on the current. Orig. art. has:
2 figures and 2 formulas.

SUB CODE: 13, 09 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 003

Card 1/1

Faktorovich, A. M.--"Toward diagnosis of neurobrucellosis," Trudy (Barnt. gos. med. in-t), Vol. VII, 1948, s. 209-12

SO: U-3204, 10 April 1953, (Letopis 'Zhurnal 'nykh Statey, No. 3, 1949)

FAKTOROVICH,A.M., kandidat tekhnicheskikh nauk

Unified method of calculating traction controls for rope haulage
and conveyor belts. Zap.Len.gor. inst.32 no.1:112-115 '54.
(Mine haulage)   (MLRA 9:1)

FAKTOROVICH,A.M., kandidat tekhnicheskikh nauk

Maximum length of a one drive scraper conveyor. Zap.Len.gor.inst.
32 no.1:116-123 '54.   (MIRA 9:1)
                    (Conveying machinery)

FAKTOROVICH, A.M.

Train length for haulage by electric contact locomotives in main
coal mine haulageways. Zap. Len. gor. inst. 34 no.1:58-68 '57.
(Mine railroads)   (Electric locomotives)   (MIRA 10:9)

KARELIN, Nikolay Timofeyevich; FAKTOROVICH, A.M., dots.; POLYAKOV, N.S.,
    prof., retsenzent; RENOVICH, A.A., dots., retsenzent; BILICHENKO,
    N.Ya., retsenzent; LIVOVICH, A.V., retsenzent; KOLOMIYTSEV, A.D.,
    otvetstvennyy red.; PROZOROVSKAYA, V.L., tekhn. red.; IL'INSKAYA,
    G.M., tekhn. red.

[Mine haulage] Rudnichnyi transport. Moskva, Ugletekhizdat, 1958.
276 p.   (MIRA 11:9)
                        (Mine haulage)

FAKTOROVICH, A.M., dotsent

Use of continuous action, bucket-type transportation arrangements
for coal hoisting in vertical mine shafts. Izv. vys. ucheb. zav.;
gor. zhur. no.8:132-138 '58.   (MIRA 12:5)

1.Leningradskiy gornyy institut.
(Mine hoisting)

POLEVOY, Viktor Vasil'yevich; POKROVSKAYA, Vera Nikolayevna; FAKTOROVICH,
Abram Mikhaylovich; GERONT'YEV, V.I., prof., doktor tekhn.nauk, obshchiy
red.; MEDVEDEV, L.G., otv.red.; KOLOMIYTSEV, A.D., red.izd-va;
SHKLYAR, S.Ya., tekhn.red.

[Cable belt conveyors] Lentochno-kanatnye konveiery. Pod obshchei
red. V.I.Geront'eva. Moskva, Ugletekhizdat, 1959. 52 p. (MIRA 12:4)
    (Conveying machinery)   (Mining machinery)

FAKTOROVICH, A.M., dotsent

Length of conveyer belts with one drive. Izv.vys.ucheb.zav.; gor.
zhur. no.8:63-68 '59.   (MIRA 13:5)

1. Leningradskiy ordena Lenina i orden.   .dovogo Krasnogo Znameni
gornyy institut imeni G.V. Plekhanova. Rekomendovana kafedroy
rudnichnogo transporta.
            (Conveying machinery)

SHENDEROVA, R.L.; FAKTOROVICH, A.M.

Examples of uses of conveyers in foreign mines. Gor.zhur. no.3:62-
63 Mr '60.   (MIRA 14:5)

1. Leningradskiy gornyy institut.
                        (Conveying machinery)

KABANOV, V.A., inzh.; FAKTOROVICH, A.M., dotsent

Ways of expanding the field of use of a multirope mine
hoist with friction pulleys. Izv.vys.ucheb.zav.; gor.zhur.
no.7:121-124 '60.   (MIRA 13:7)

1. Leningradskiy ordena Lenina i ordena Trudovogo Krasnogo
Znameni gornyy institut imeni G.V.Plekhanova. Rekomendovana
kafedroy gornoy mekhaniki.
                    (Hoisting machinery)

TYMOVSKIY, L.G., kand.tekhn.nauk; FAKTOROVICH, A.M., kand.tekhn.nauk;
        PERTEN, Yu.A., inzh.

        Hoisting of rock in deep strip mines using combined transportation
        systems. Gor.zhur. no.5:17-20 My '61.   (MIRA 14:6)

        1. Leningradskiy gornyy institut.
                    (Strip mining)   (Mine haulage)

SERGEYEV, O.I., inzh.; FAKTOROVICH, A.M., inzh.

Results of testing a new type of chute gate. Izv.vys.ucheb.zav.;
gor.zhur. 5 no.9:87-89 '62.   (MIRA 15:11)

1. Leningradskiy ordena Lenina i ordena Trudovogo Krasnogo Znameni
gornyy institut imeni G.V.Plekhanova. Rekomendovana kafedroy
rudnichnogo transporta.
            (Ore handling--Equipment and supplies)

FAKTOROVICH, A.M.

New clamping device for rope conveyors and elevators. Zap. LGI
47 no.1:42-44 '62.
                    (Conveying machinery) (Mine hoisting)   (MIRA 16:5)

FAKTOROVICH, A. S.

      "The Importance of Vitamin C in the Clinical Course of Malaria in Children, With an Evaluation of the Phagocytic Capacity of the Organism." Cand Med Sci, Leningrad Pediatrics Medical Inst, From the Kuybyshevskaya Oblast Sci Res Inst of Maternal and Child Welfare, Leningrad, 1955. (KL, No 13, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

USSR/ Electronics – Germanium diodes

Card 1/1   Pub. 89 – 12/24

Authors   : Vybornov, A., and Faktorovich, B.

Title   : The "Moskvich" receiver with germanium diode rectifier

Periodical : Radio 5, page 28, May 1955

Abstract : The advantages derived by using germanium high-voltage diodes in low-power rectifiers are discussed. One of the difficulties encountered in the use of flat germanium diodes DG-Ts24 is the dependence of their electrical properties upon the temperature of the surrounding medium, e. g., a reverse disruptive diode voltage drops sharply with an increase in temperature. It is shown that one DG-Ts24 diode at a temperature of + 52° C and rectified current of 50 mamp is capable of sustaining a voltage 185–195 v. Diagram; illustration.

Institution : .....

Submitted   : .....

9(2)

AUTHOR: Faktorovich, B.

SOV/107-59-4-41/45

TITLE: A Transistorized Microphone Amplifier (Mikrofonnyy usilitel' na poluprovodnikovom triode)

PERIODICAL: Radio, 1959, Nr 4, p 58 (USSR)

ABSTRACT: The author suggests a transistorized amplifier for dynamic microphones, as shown in Figure 1. A P6G transistor is installed together with the other components within a MD-42 dynamic microphone. In this case, the amplifier and the microphone receive power from the same rectifier as shown by Figure 2. The author further suggests a microphone amplifier circuit with a P6D transistor which receives power from a 3-volt battery, as shown by Figure 3. The amplification factor of such a stage is 250 to 300. There are 3 circuit diagrams.

Card 1/1

OSTASHEVSKAYA, N.S.; OLENTSEVICH, N.A.; BASHKATOVA, A.S.; LANDA, M.B.;
KUNSHCHIKOVA, A.A.; LISIN, D.M.; KUROV, V.V.; YEMEL'YANOV, N.A.;
FAKTOROVICH, B.A.; KUROKHTIN, A.N.

Industrial testing of Listvyanka anthracite for lining the
bottom of aluminum electrolytic cells. TSvet.met. 38
no.10:62-66 O '65.

(MIRA 18:12)

FAKTOROVICH, B.S.; DUBINSKAYA, G.N. [Dubyns'ka, H.N.]

Proposals of efficiency promoters adopted by the Kiev Combine
of Synteheic Fibers. Leg. prom. no.3:45-47 Je - Ag '62. (MIRA 16:2)

(Kiev—Textile industry—Technological innovations)

FAKTOROVICH, Blyum Shimanovna[Faktorovych, B.Sh.]; YAROTSKIY, V.D.
[IArots'kyi,V.D.], inzh., red.izd-va; BEREZOVYY, V.N.,
[Berezovyi,V.N.], tekhn. red.

[Manufacture and finishing of viscose rayon]Obrobka viskoznoho
shovku. Kyiv, Dershtekhvydav URSR. 1962. 54 p. (MIRA 16:3)
               (Rayon)

. . . , I. M.

22097 Mltorovich, I.M. Izcheniye perdiguse nesorozh ..p'h i sterd'sstr. c
Jersh ta ml2lo/kc stre tetsidovey cml'sip y. Truchny, 3alc, SSi., N. 5, .
еtl. 2.9-50

SC: letopis' Zhurnal'nyhh Statey, Mc. 2°, le1'r., . . .".

FAKTOROVICH, I.M.

Treatment of epidemic cerebrospinal meningitis in children. Pediatriia, Moskva No.4:62-63 July-Aug 51. (CLML 21:4)

1. Of the First Municipal Children's Hospital, Nikolayev. 2. Treatment with combined sulfonamide preparations and penicillin.

FAKTOROVICH, K.A.

Diseases of two-year old rainbow trout raised on artificial feed.
Vop.ikht. no.6:156-164 '56. (MLRA 9:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut ozernogo i
rechnogo rybnogo khozyaystva --VNIORKh.
(Trout--Diseases and pests)

USSR / General Biology. Individual Development. Re-   B
          generation.

Abs Jour: Ref Zhur-Biol., No 23, 1958, 103304.

Author : Faktorovich, K. A.
Inst   : ~~Academy of Sciences~~ USSR.
Title   : Regeneration of the Liver of Rainbow Trout. *(Salmo irideus)*

Orig Pub: Dokl. AN SSSR, 1956, 110, No 2, 3**-303.

Abstract: The regeneration of hepatic tissue was studied in
          117 specimens of rainbow trout in the process of
          recovery from fatty degeneration of the liver pro-
          duced by the use of a deficient diet. Sections of
          liver were fixed during the period of the disease
          and subsequently every month for 11 months. As a
          result of the disease a marked disturbance of the
          liver structure was observed: destruction of hepatic
          cells and replacement of them with insoluble fat,

Card 1/2   *Vsesoyuznyy nauchno-issledovatel'skiy institut
           ozernogo i rechnogo rybnogo khozyaystva.*

USSR / General Biology. Individual Development. Re-   B
          generation.

Abs Jour: Ref Zhur-Biol., No 23, 1958, 103304.

Abstract: which was stained with Sudan III after fixation with
          Bouin's fluid. The author observed the gradual re-
          covery of the typical liver structure and the elim-
          ination of the insoluble fat from the liver cells
          by means of its conversion to soluble fat and the
          uptake of the clumps of insoluble fat by phago-
          cytes. A large number of the hepatic cell nuclei
          were in a state of amitotic division. In all of
          the material examined only a single mitosis was
          found. The author comes to the conclusion that the
          liver of the rainbow trout is capable of regenera-
          tion after marked damage to its microscopic struc-
          ture. -- B. P. Solopayev.

Card 2/2

FAKTOROVICH, K.A.

Disorders in fat metabolism in the liver of rainbow trout raised on
artificial feeds. Trudy sov.Ikht.kom. no.8:237-243 ' 58.
                                    (MIRA 11:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut ozernogo i rechnogo
rybnogo khozyaystva.
           (Trout) (Fat metabolism) (Liver--Diseases)

FAKTOROVICH, K.A.

Lipoidic degeneration of the liver in the rainbow trout and its
connection with the use of artifical feeds. Trudy sov.Ikht.kom.
no.9:69-73 '59.   (MIRA 13:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut ozernogo i
rechnogo rybnogo khosyaystva.
      (Trout--Diseases and pests) (Liver--Diseases)

FACTOROVICH, K. A.,   Cand Bio Sci -- "Histophysiological study of the liver of certain salmons in connection with their biology and artificial propagation." Len, 1961.   (Len Vet Inst of the Min of Agri RSFSR) (KL, 8-61, 239)

- 176 -
- 175 -

FAKTOROVICH, K.A.

Importance of nutrition in the development of ceroid
degeneration of the liver in the rainbow trout. Trudy
sov. Ikht. kom. no.14:215-219 '62.   (MIRA 15:12)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut ozernogo
i rechnogo rybnogo khozyaystva (GosNIORKh).
                    (Fishes--Food)
            (Trout--Diseases and pests)
                (Liver--Cirrhosis)

FAKTOROVICH, L.M., inzhener.

Third All-Union conference courses on problems of thermal building insulation.
Biul.stroi.tekh. 10 no.15:39 O '53.   (MLRA 6:10)

1. Lentermoproyekt.   (Insulation (Heat))

FAKTOROVICH, Lev Mikhailovich, ; GOLYAND, M.M., redaktor; RUSAKOVA, L.Ya., vedushchiy redaktor; GENNAD'YEVA, I.M., tekhnicheskiy redaktor.

[Heat insulating materials and structures] Teploizoliatsionnye materialy i konstruktsii. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, Leningr.otd-nie, 1957. 450 p.

(MIRA 10:5)

(Insulation (Heat)) (Insulating materials)

FAKTOROVICH, L.M., inzh.

Using aluminum foil for heat insulation of hulls. Sudostroenie
24 no.11:46-50 N '58.   (MIRA 12:1)
                    (Hulls(Naval architecture)) (Insulating materials)

FAKTOROVICH, L. M.

Results of prolonged use of aluminum foil as an insulating material on ships. Mor.flot 19 no.1:14-16 Ja '59.   (MIRA 12:3)

1. Nachal'nik Leningradskogo otdeleniya sudovoy izolyatsii VNIPI "Teploproyekt."
            (Aluminum) (Metal foils) (Insulating materials)
                        (Ships--Equipment and supplies)

FAKTOROVICH, Lev Mikhaylovich; RAUSH, O.I., nauchnyy red.; DOLMATOV,
P.S., vedushchiy red.; GENNAD'YEVA, I.M., tekhn.red.

[Designing and installing heat insulation] Proektirovanie i
montazh teplovoi izoliatsii. Leningrad, Gos.nauchno-tekhn.
izd-vo neft. i gorno-toplivnoi lit-ry, Leningr.otd-nie, 1960.
439 p.   (MIRA 13:5)
                        (Insulation (Heat))

PHASE I BOOK EXPLOITATION   SOV/4947

Faktorovich, Lev Mikhaylovich

Proyektirovaniye i montazh teplovoy izolyatsii (The Design and Installation
   of Heat Insulators) Leningrad, Gostoptekhizdat, 1960. 439 p. 5,200 copies
   printed.

Scientific Ed.: O.I. Raush; Executive Ed.: P.S. Dolmatov; Tech. Ed.: I M.
   Gennad'yeva.

PURPOSE: This book is intended for engineers and technical personnel concerned
   with the application and use of heat insulation.

COVERAGE: The author gives basic information on heat insulating materials and
   discusses problems of the design and application of heat insulation used in
   shipbuilding, construction, refrigeration, the petroleum and power industries, etc.
   Recommendations on the design and selection of adequate types of heat insu-
   lation and materials are also included. No personalities are mentioned.
   There are 74 references, all Soviet.

Card 1/7

The Design and Installation (Cont.) SOV/4947

TABLE OF CONTENTS:

Card 2/5

FAKTOROVICH, Lev Mikhaylovich; RAUSH, O.I., nauchnyy red.; DESHALYT,
M.G., ved. red.; SAFRONOVA, I.M., tekhn. red.

[Brief manual on heat insulation]Kratkii spravochnik po tep-
lovoi izoliatsii. Leningrad, Gostoptekhizdat, 1962. 450 p.
(MIRA 15:8)

(Insulation (Heat))

MIROPOI'SKIY, Z.L.; FAKTOROVICH, L.Ye.

Generalization of experimental data on the effect of a heated channel
length on critical heat flows. Dokl. AN SSSR 141   no.6:1353-1356
D '61.   (MIRA 14:12)

1. Energeticheskiy institut im. G.M.Krzhizhanovskogo AN SSSR. Pred-
stavleno akademikom V.F.Glushko.
              (Heat--Transmission) (Hydrodynamics)

BELOTSERKOVSKIY, Grigoriy Bentsionovich; BABKIN, N.I., inzh.,
        retsenzent; ZHDANOV, V.K., inzh., retsenzent; KALANTAROV,
        M.N., inzh., retsenzent; TELEZHKO, M.I., inzh., retsenzent;
        FAKTOROVICH, M.D., inzh., retsenzent; FEDOTOV, M.D , inzh.,
        retsenzent; SAMOYLOV, G.V., inzh., red.; IVANOV-TSYGANOV,
        A.I., kand. tekhn. nauk, red.; BOGOMOLOVA, M.F., red. izd-va;
        ROZHIN, V.P., tekhn. red.

        [Antennas]Antenny. Izd.2., perer. i dop. Moskva, Oborongiz,
        1962. 491 p.   (MIRA 16:2)
                (Antennas (Electronics))

FAKTOROVICH, M.D.; KANEVSKIY, Ye.N.

Universal ballast measuring hopper car. Biul.tekh.-ekon.inform.
no.11:75-76 ' 58.   (MIRA 11:12)
                    (Railroads--Cars)

AUTHORS: **Strikovich** M. A., Corresponding Member, Academy of Sciences, USSR. Faktorovich, L. Ye.

TITLE: The Influence of the Tube Length on the Magnitude of Critical Heat Flow in the Case of a Forced Motion of a Steam-Water Mixture (Vliyanive dliny truby na velichinu kriticheskogo teplovogo potoka pri vynuzhdennom dvizhenii **parovodyanoy** smesi)

ABSTRACT: In the Laboratory for ... **Laboratory for** ... In ... professor ... **Institute** ... the critical ... upon the magnitude of the critical heat ... The experiments were conducted at a for ... water mixture, with boiling water, ... of 26 and 187 atmospheres ... pressures ... rate of ... and ... kg m² sec, and at a velocity ... of ...

Card 1/4

The Influence of the Tube Length on the Magnitude of Critical Heat Flow
in the Case of a Transu Section of a Steam-Water Mixture

1. The test section consisted of a drawn tube of
stainless steel. These experiments confirmed the results of
... the critical heat flows ... increase
... with a rising steam content ...
... critical heat flow ...

... ed tube to reduced the critical heat flows increase under the
conditions investigated. With increasing pressure the in-
fluence of the length of tube upon q_{crit} becomes less pro-
nounced. Further investigations, mainly for horizontal flow
will be necessary concerning the influence of the length

Card 2/4

can influences of the flow length in the ... ...

in the flow of a second section of a ... ...

and the the ... of the ... ... there are
4 figures and 3 references, ... which are ... t.

SUBMITTED: March 21, 1958

1. Heat transfer--Analysis   2. Heat transfer--Testing equipment
3. Heat exchange--Performance   4. Water-steam mixtures--Thermodynamic
properties

Card 2/2

SOV/96-59-2-14/18

AUTHORS: Styrikovich, M.A., Corresponding Member, AS USSR
Faktorovich, L. Ye., Engineer

TITLE: The Influence of the Length of a Heated Section of Tube
on the Magnitude of Critical Rates of Heat Transfer
During Forced Motion of a Steam-Water Mixture (Vliyaniye
dliny obogrevayemogo uchastka truby na velichinu
kriticheskikh teplovykh potokov pri vynuzhdennom
dvizhenii parovodyanoy smesi)

PERIODICAL: Teploenergetika, 1959, Nr 2, pp 83-88 (USSR)

ABSTRACT: A good deal of work has been done on critical boiling
rates during the forced flow of steam water mixture in
pipes but all the work has been done on short lengths
of tube, it being assumed that this would not affect
the results. However, there is some indirect evidence
that the length of the heated section does influence
the magnitude of the critical rate of heat transfer.
The object of the present work was to determine this
influence during the forced flow of steam water mixture
in pipes at pressures of 26, 100 and 180 atm with rates
of flow of 850 and 3000 kg/m²sec and with steam contents
from 0 to 1. The experimental section was made of

Card 1/4

SOV/96-59-2-14/18

The Influence of the Length of a Heated Section of Tube on the
Magnitude of Critical Rates of Heat Transfer During Forced Motion
of a Steam-Water Mixture

seamless tube of stainless steel grade EYa-IT, of
diameter 3.04×0.5 mm and of length 331, 160 or 40 mm.
The tubes were heated by alternating current. Super-
heated steam at 300 atm and 500 to 600°C from a once-
through boiler was delivered to the tubes. After steam
supply conditions had become steady electric current was
supplied to the tube and the heat flux was raised in
small steps. Conditions were adjusted after each
increase and this was continued until critical boiling
occurred which was recognised by a sudden sharp increase
in the tube wall temperature. The errors that might
arise in the work are estimated. Curves of critical
rates of heat transfer as function of steam content and
ℓ/d ratio are given in Fig 1, 2 and 3. It will be seen
that on all graphs over the investigated range of
pressure, speed and steam content, as the tube length is
increased from 40 to 331 mm the critical heat transfer
rate is reduced by a factor of 1.5 to 5. It is explained

Card 2/4

The Influence of the Length of a Heated Section of Tube on the
Magnitude of Critical Rates of Heat Transfer During Forced Motion
of a Steam-Water Mixture

that experimental points that are underlined on the
graph are lower than they should be. The influence on
critical rates of heat transfer of pressure, speed and
steam content, which have been described elsewhere are
confirmed. Curves of critical rates of heat transfer
as function of ℓ/d are given in Fig 4, from which it will
be seen that the influence of this ratio is particularly
great when the ratio is small. When the ratio is
greater than 50 it has much less influence on the critical
rate of heat transfer. Suggestions are made as to the
reasons why the critical rate of heat transfer should
depend on tube length when a two-phase medium is heated.
It is concluded that in the case of forced motion of
steam water mixture in a vertical steam raising tube
3 mm diameter at pressures of 26, 100 and 180 atm and
flow rates of 850 and 3000 kg/m^2sec and steam contents
of 0 to 0.8 as the length of the experimental tube is
diminished from 331 to 40 mm the values of critical rate

Card 3/4   of heat transfer increased by a factor of 1.5 to 5 with

. The Influence of the Length of a Heated Section of Tube on the
Magnitude of Critical Rates of Heat Transfer During Forced Motion
of a Steam-Water Mixture

the tube diameter used. For a tube of given diameter
the influence of length on critical values of heat flow
becomes less as the flow rate, pressure and steam
content increase. Since the usual experimental
installations have tubes that are very much shorter
than are found in practice the influence of the length
should be taken into account in design practice.
There are 4 figures and 9 references of which 7 are
Soviet and 2 English.

ASSOCIATION: Energeticheskiy Institut AN SSSR (Power Institute,
AS USSR)

Card 4/4

STYRIKOVICH, M.A.; MIROPOL'SKIY, Z.L., kand.tekhn.nauk; SHITSMAN, M.Ye.,
    kand.tekhn.nauk; MOSTINSKIY, I.L., inzh.; STAVROVSKIY, A.A., inzh.;
    FAKTOROVICH, L.Ye., inzh.

Effect of superimposed elements on the setting up of boiling
crisis in the steam genera ing pipes. Teploenergetika 7
no.5:81-88 My '60.   (MIRA 13:8)

1. Energeticheskiy institut AN SSSR. 2. Chlen-korrespondent AN
SSSR (for Styrikovich).
(Heat--Radiation and absorption)   (Boilers)

FAKTOROVICH, L.Ye., inzh.

Substitute for mineral powder. Avt. dor. 24 no.7:32 Jl '61.
(MIRA 14:7)

(Sand) (Road materials)

FAKTOROVICH, M.E., starshiy nauchnyy sotrudnik, kandidat tekhnicheskikh nauk.

Nonuniform flow of fluids in a pressureless prismatic (cylindrical) closed channels. Izv.VNIIG no.32 '47.   (MLRA 10:2)
            (Hydraulics)

FAKTOROVICH, M. Ye

FA 197158

USSR/Engineering - Hydraulic Engineering,   Apr 51
Dams

"Hydrodynamic Pressure in Bottom Tunnels of Over-
flow Weirs," M. E. Faktorovich, Cand Tech Sci

"Gidrotekh Stroi" No 4, pp 37-39

Describes one possible method of detg hydrodynamic
pressure in bottom tunnels of spillway dams for
the case when tunnel gate is closed and spillway
is over top of dam, and when considerable decrease
in hydrodynamic pressure may sometimes cause vi-
bration of dam and affect the structure's endur-
ance.

197T58

1. FAKTOROVICH M. Ye.

2. USSR (600)

4. Hydrodynamics

7. Damping of energy at the confluence of currents. Gidr. stroi. 21, no. 8, 1952.

9. **Monthly List of Russian Accessions**, Library of Congress, January, 1953. Unclassified.

FAKTOROVICH, M.E., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Overflow dam with self-dissipation of energy. Izv.VNIIG
48:196-212 '52.   (MIRA 12:5)
                    (Dams)

FAKTOROVICH, M.E., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Forced motion of a liquid joined by a linearly changing dis-
charge. Izv.VNIIG 50:44-57 '53.   (MIRA 12:5)
              (Hydrodynamics)

FAKTOROVICH, M.E., kandidat tekhnicheskikh nauk.

hydraulic calculation of deep spillways. Gidr. stroi. 26 no.4:
43-45 Ap '57.   (MLRA 10:6)
                        (Spillways)

FAKTOROVICH, M.E., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Calculating the conjugate state of head and tailwater for
spillway dams with a slip-type outlet on the apron and use
of the mutual impinging of streams for energy dissipation.
Izv.VNIIG 58:177-186 '58.   (MIRA 13:7)
                    (Spillways)

FAKTOROVICH, M.E., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Investigating the interaction of joining streams of liquid with a possibility of bilateral enlargement in the vertical plane. Izv.VNIIG 61:17-30 '58.   (MIRA 13:6)
(Hydraulics)

FAKTOROVICH, M.E., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

The siphon method of building dams across rivers. Izv.VNIIG 62:
165-169 '59.   (MIRA 13:6)
            (Dams)

FAKTOROVICH, M.E., kand.tekhn.nauk

Spillways with multiflow energy dissipation on slitlike
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